Dr. Harrison Receives Medal For Contributions to Physics

of Science at the Institute will be and Director of the Spectroscopy the recipient of an Elliott Cresson Laboratory. He became Dean of Sci-Medal, October 21, at the annual ence in 1942. Medal Day ceremonies of The Franklin Institute of the State of Pennsylvania. The award is being made for his work in spectroscopy.

Without the work of Dr. Harrison, the scientist would find it much more difficult to find precise knowledge of the energy states in the most complex atoms. Since 1925 he has occupied a great part of his research hours with the study of atomic wavelengths and perturbations.

Atoms Emit Light

In his Atoms in Action, published in 1939 and translated into twelve foreign languages, Dr. Harrison states that any atom, when struck a hard atomic blow, emits light which carries many mysteries. "It is the function of the spectroscope to analyze this light and thus lay bare these secrets for the eye of science to read." He further stated that by using various formulae to represent characteristics of the light emitted, physicists are able to get a concise, clear picture of the interior behavior of the atom.

Convinced there was a lack of available data to solve the problem completely, Dr. Harrison turned to the classification of spectral lines in terms of parent energy levels to get the needed data. After further calculations he became convinced that mechanisms were needed. The result was the interval sorter, enabling a photographic record of the dial reading of the wave-number to be made.

Dr. Harrison has recently undertaken to improve the resolving power in diffraction instruments and spectroscopes. His approaches are now known to be fully successful.

Born in San Diego, California in 1898, Dr. Harrison was graduated from Stanford University in 1919 with an A.B. degree; in 1922 he received his Ph.D. degree there, and until 1930 he taught physics. In the latter year he came to the Institute as a profes-

Dinghies Receive Paint And Telltales To Aid Skippers

proof paint has been strategically located on the floor of the boat, and a telltale has been introduced atop the mast to give a ready indication of the wind direction.

The fiberglas surfaces of the boat formerly were slippery when wet. This is an advantage on the outside of the boat, but a disadvantage inside where the skipper needs a toehold. of the boat. It provides effective traction under all weather conditions and Athletics. keeps the Institute's skippers from sliding all over the deck.

Wind Indicator

that is mounted on the peak of the

It has been the practice of the Nau-

(Continued on page 4)

Dr. George Russell Harrison, Dean Laboratory of Experimental Physics

Largely responsible for the 10 very successful international Spectroscopy Conferences held at the Institute, Dr. Harrison has become world-famous for the development of ingenious



machines which automatically determine spectroscopic data. His intense work has culminated in the development of the M.I.T. Wave Length

During World War II, Dr. Harrison was Chief of the Optics Division of the Office of Scientific Research and Development and near the end of the war also Chief of the Division of Physics. He also served as Chief of (Continued on page 4)

Selective Service **ExamApplication ToBeDistributed**

Applications for the November 19, 1953 and the April 22, 1954 adminis- professors and specialists. sor in physics where he served in the trations of the College Qualification capacity of Director of the Research Test are now available in room 145- Law 584, 79th Congress, the Fulbright ligible for competition are U. S. citi- in every person and every thing con-

> this test on either date should apply rencies and credits acquired through at once for an application and a bulle-the sale of surplus property abroad tin of information.

Following instructions in the bul- with other nations. letin, the student should fill out his

(Continued on page 4)

Highlight Frosh Week

An acquaintance dance, a British motion picture and an address by Dr. James R. Killian Jr. were the highlights of this year's Freshmen Weekend. The Weekend, attendance at which was compulsory for all Freshmen, started last Wednesday when the 850 members of the Class of '57 officially registered and received their section assignments and the names of their Faculty Advisors. Each of the thirty-one freshmen sections was divided into half and a faculty member assigned to each half. On Thursday and Friday the Frosh met with these advisors and made a final decision on a program of study for the coming term.

The Lecture Series Committee showed the British comedy "Tight Little Island" Friday night following a class meeting earlier in the day which saw speeches by Dr. Karl T. Compton, Chairman of the Corporation, and Dr. Farnsworth, medical director. The Freshman Acquaintance Dance was held last Saturday night in Walker Memorial and was very (Continued on page 2)

Confirming The Kill

Dance, Movie, Speeches William Tells Freshmen About Opportunities; Bowditch Also Speaks



INSTITUTE OF

TECHNIQUE photo by Roy Peck

Grad Scholarships Abroad

Chances For Foreign Studies and Research

Opportunities for approximately 800 Americans to undertake graduate 1954-55, twelve Marshall Scholarships study or research abroad in 41 coun-will be available for American gradutries during the 1954-55 academic ate students wishing to study at a vear under the terms of the Fulbright British university. Act and the Buenos Aires Conven- The Marshall Scholarships have tion were announced this summer by been established by the British Govthe Department of State.

and those with specialized research "America's generous and far-sighted projects to study in foreign institu- program for European recovery." tions and universities under renowned Twelve scholarships will be granted

Act, which authorizes the Department zens, men or women under the age nected with it." of State to use certain foreign curfor programs of educational exchange

Interested Seniors and Graduate application and mail it immediately Students presently enrolled at the in the envelope provided to Selective Institute should request application Service Examining Section, Educa- forms from David A. Dudley, Ful-Two improvements have recently tional Testing Service, P. O. Box 586, bright Adviser, Room 3-108, the Adbeen introduced in the Institute's fleet Princeton, New Jersey. Applications missions Office. The closing date for of fiberglas dinghies. A coat of skid-for the November 19 test must be receipt of applications from the Fulbright Adviser is October 16.

Fulbright Awards Give Marshall Scholarships Granted To Americans In British Universities

Beginning in the academic year

ernment as a gesture of thanks for The Fulbright awards will enable Marshall Aid, in gratitude for what students in all fields of graduate work the British Government has called

annually, each for a two-year period The grants are made under Public which may be extended to three. El-

(Continued on page 2)

First Convocation Features Program By Musical Clubs

The Band and Glee Clubs will entertain the entire student body at the October 5 Convocation in the first scheduled public appearance of the Institute Musical Clubs of the new

Six other major concerts are planned this year for which only the material for the Christmas concert has been definitely decided upon. The schedule is as follows:

November 15—Solo Concert — Morss

Hall. December 12 — Christmas Concert: with the Orchestra, Glee Club, Choral Society and assisting artists. Program consists of the Bruckner

Te Deum and the Schubert Mass in E Flat. To be given at Jordan Hall. Concert at Thayer Academy, Braintree, Mass.

at the Boston Conservatory. April 25 — M.I.T. and Colby Junior

College Combined Orchestra Concert at New London, New Hamp-

Freshmen Hear Address By Institute President **During Class Meeting**

"College offers young people an opportunity to discover themselves, a process of liberation which is part of the development of an adult," Dr. James R. Killian, Jr., President of the Institute, told members of the entering class of 1957 at a class meeting held in Rockwell Cage, Thursday night.

"This opportunity of self-discovery," Dr. Killian said, "is good, provided the student knows that freedom requires mature responsibility. If one wants the freedom to be free, one must share the responsibility for maintaining an orderly community where there is room for freedom because the members of the community impose a practical discipline upon themselves. . . . Any community must maintain an orderly environment where each man gives up a little so that every man can have a lot."

Must Be Competent Citizens

Dr. Killian stressed the importance of preparing men to be competent citizens as well as competent wageearners. "It is our conviction," he said, "that you can be neither an effective scientist, engineer, executive, economist, nor architect without some understanding of our society and of human relationships. These objectives, which reflect themselves in our program at the Institute . . . illustrate our concept that a great institute of technology must have first-rate science and first-rate general education if it is to educate first-rate professional men. . . . If a college is really to perform its function, it must seek to bring out the very best that is

He explained that the student should realize himself fully while in college and, in so doing, develop a sense of values, a feeling for the firstrate, a concept of professional standards, and a recognition of what is beautiful, true, and good in people, in books, in work, and in life.

Speakers at Thursday night's meeting included, in addition to President Killian, Dean E. Francis Bowditch, Dean of Students, and Dean L. Jacoby, '54, president of the Senior Class.

Ross Photographs Now Exhibited AtHaydenGallery

An exhibition of photographs by Donald Ross is now on view in the New Gallery of the Charles Hayden Memorial Library of the Institute and will be shown until October 3.

Speaking of his work, Mr. Ross anuary 17 - Repeat of Christmas said: "It is always my purpose to obtain a strong and powerful image of whatever object I may photograph. March 14 - Annual Spring Concert: I find this most easy when I lay aside M.I.T. and Mount Holyoke Com- my own intellectual programs and bined Orchestra Concert, to be given look for no moral, political, or social situations on my ground glass. The visual cliche gives way to simple perception."

> Donald Ross resides in Berkeley, (Continued on page 4)

(Continued on page 4)

Athletic Department Explains Newly Formed Point System

This has been remedied by the appli- be greeted by an almost completely Athletic Department schedule: cation of a commercial non-skid deck new system of athletic requirements paint in a broad swath on the floor during the years to come, according to a bulletin from the Department of

men students will be required in the intercollegiate sports earn three futurë to undergo a program based points each per term. Equivalent The new wind indicator is a piece upon a "point system." Before com- points are granted for managing or of red ribbon with a fishtail end at-pleting their junior year at the Insti-for acting as an AA official. tached to a swivel on a short staff tute, such men must compile a minimum of six points.

tical Association to tie bits of string for the student three points per term. a combination of two sports lasting on the stays (the guy wires that hold In addition, intercollegiate and Field one-half term each. The only com-Day sports, excepting the Glove

Newcomers to the Institute are to | Fight, earn credits according to an Field Day Sports

Field Day sports are good for two points each, as are intercollegiate cross-country, golf, sailing, soccer, All male freshmen and other new and outdoor track, per term. All other

In the first year athletic program, several options are given. The fresh-Participating in the scheduled first man may choose either to take deyear physical education course gains velopmental classes, a single sport, or (Continued on page 4)

Tech The

Tuesday, September 22, 1953 VOL. LXXIII

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Editorials

WELCOME - AND WELCOME BACK

The time has come, when once again vacation experiences are exchanged - the summer's exploits reminiscently described to friends - and then stored in the recesses of the memory to be replaced by the more exacting work of a new semester. This being the case, THE TECH has no alternative but to welcome all classes back and wish them good luck in the coming year.

It is extremely likely that this will be the last in a long series of "welcomes" offered to the class of 1957. The freshmen have, by now, become full fledged members of the M.I.T. "community" (by virtue of their registration cards) and have had their first taste of classes at the Institute.

Full integration will probably come slowly but the initial shock of a new environment is at last over. Much relies now upon the freshmen themselves and their attempts toward becoming adapted — their ability to get along with others.

It is in this realm that the insecure freshman finds difficulty. Certain factors are present, however, which may account for the conflicts.

An individual naturally finds security and an "at-homeness" among members of his own group and conversely an antagonism toward outsiders. It is the unfortunate freshman who must make the efforts to break this barrier to his inclusion in the group. It is a two way process, moreover, of intercourse and communication between the freshmen and upperclassmen which will most rapidly allow the new student to acclimate himself properly.

Although the Freshman Advisory Program is designed to accomplish just that, it may well require a pause for self evaluation on the part of each of us to assure ourselves that as upperclassmen we have not developed an exclusive, unnatural "wegroup" attitude toward the new student.

A WORD TO THE WISE....

It occurs to us that there is a very real constraint in a technical school such as M.I.T. from which grows a distress that is not limited to over-earnest freshmen, or their over-indulgent and doting parents. It is a constraint which fosters illusions of laborious study — that work is as hard as one's imagination will allow, or as difficult as the sympathetic members of his family think it to be.

The curtailment of normal instinctive activities (a decision which is reached when young men intend to become largely devoted to serious study) is unfortunately the source of much of this distress. It is certainly the unfortunate freshman who embarks upon a career of constant study which leads only to greater illusions of overwork and hence to withdrawal from all forms of diversion, no matter how important they may be to well rounded development.

. . . IN LOVE AND WAR

A certain amount of fair play was lacking at the Freshman Acquaintance Dance last Saturday when fraternity members and upperclassmen "removed from action" several of the girls before the dance had even gotten under way. That these men were present at a dance designed for freshmen only should have at least obliged them to give the frosh a break.

The dance, however, was a successful one and congratulations are in order for the Freshman Coordinating Committee.

Marshell Awards

No. 27

(Continued from page 1) of 28, graduates of accredited U.S.

colleges or universities. The scholarships may be held at any British university.

Finance Year's Study

The value of each award will be \$1,540 a year, with an extra \$560 a year for married men. This sum will comfortably finance a year's study at a British university, since academic fees and living costs are considerably less than in the United States. Transportation is provided from home to the British university and back.

Qualifications for the awards are distinction of intellect and character, as shown by scholastic attainment and other activities and achievements. before registration is a nerve-wrack-Preference is to be given to candidates who combine high academic ability with the capacity to play an active part at the university of their all the handshaking and the old, old choice.

The closing date for applications for 1954-55 scholarships is November malcy returns. 1. 1953. For further information, pros-British Information Services (Marshall Scholarships) 30 Rockefeller changes. Plaza, New York 20, N. Y.

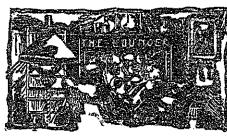
Freshmen Weekend

(Continued from page 1) successful in spite of the presence of a great many upperclassmen.

Freshmen Weekend ended Sunday with the president's reception for parents of the new class.

CREW RALLY

Students interested in rowing in freshmen or varsity crew are requested to attend a rally this Thursday afternoon at 5:00 p.m. in room 1-190.



By John Seiler '55

Glazy-eyed from home cooking, with raw nerves soothed by the sleep-inducing spell of television and occasional dosages of small town romance, the average student has returned to Tech. Hoping to acclimate himself to the atmosphere by gradual re-exposure, he came early, but found activities already underway. The week ing one, with unpacking and freshmen and various odds and ends of business to transact. One can hardly wait until routine-"didcha have a nice summer?"-fade into oblivion and nor-

The place is still the same in tempo pective candidates should write to and general appearance, but there are Playing Allowed." a few new, and some welcome,

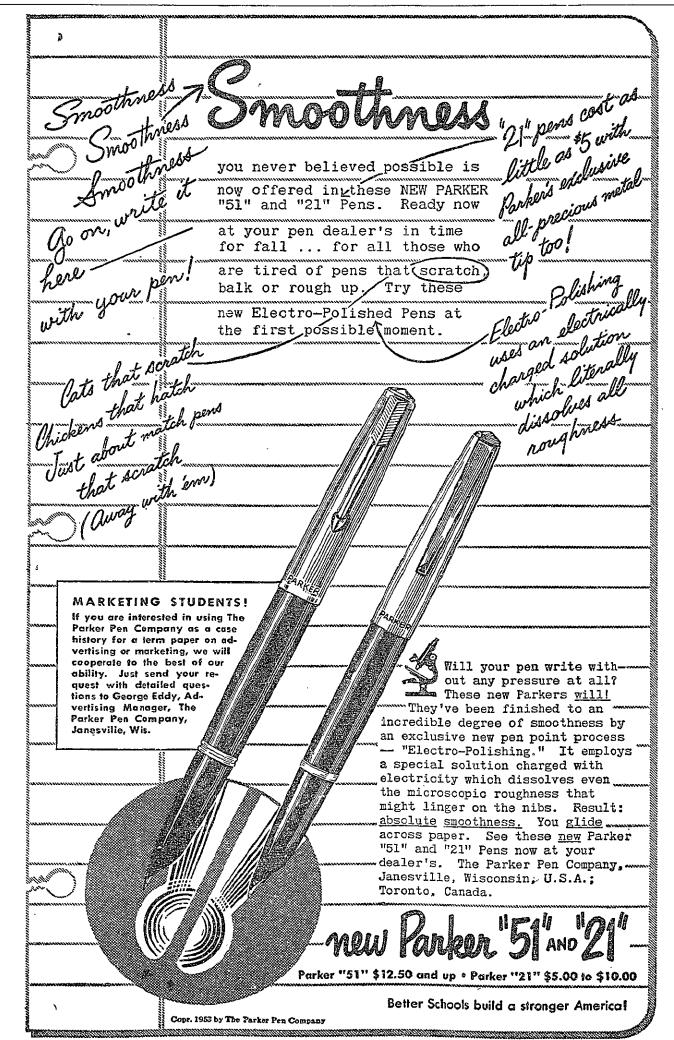
> For one thing, on the credit side, many an undergraduate neck is already strained from staring at the latest crop of coeds. Opinion is overwhelmingly favorable, and the girls have found themselves to be the center of much attention. Chivalry is being flaunted again in, of all places, the Walker dining hall, where freshmen have been carrying trays for coeds — in a completely altruistic spirit, of course! The fever has spread to some of our less indifferent upperclassmen. If you hear a group of ober. them discussing their latest exploits in a quasi-modest "it really isn't that time, there's always studying.

wonderful" tone, then it's a sure bet that some innocent frosh coed is there, wide-eyed and overwhelmed by the broad experiences of her suave audience. If you're interested-well, the line forms immediately to the rear. and gentlemen, please don't shove!

Big enigma of the moment around campus is "What are they going to do with all those stakes?" The oversized toothpicks planted in the rear of the library have caused much comment. The most exhilarating suggestion for their existence is that they will grow into eighty-foot oak trees sheltering the fragile members of the English and History Department from the slanting rays of the late afternoon sun. It is more probable that the stakes were set to sabotage the informal athletic program of East Campus residents. An accompanying sign, concrete base unaesthetically squatting near the library building, bears witness to this motivation and to a certain lack of acumen concerning the seasonal trend of athletic activity. It says to wit, "Positively No Baseball

For those looking for entertainment, Boston and environs currently abound in fine movies. "The Cruel Sea" at the Exeter, "From Here To Eternity" at the Orpheum, "The Moon Is Blue" at the Astor, and "Roman Holiday" at the neighborhood theatres are all extremely enjoyable. The legitimate theatre season is gaining momentum, and within the next month. some seven or eight new plays will try out in Boston. Symphony tickets can still be obtained, as well as tickets for the Sadler's Wells Ballet in Oct-

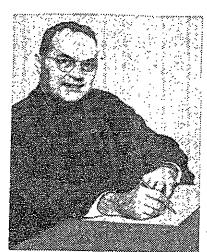
And then, if you have any spare



EDUCATORS ALL OVER AMERICA APPROVE EDUCATORS A



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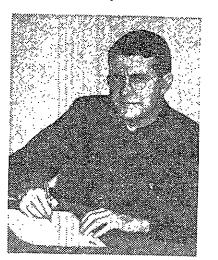
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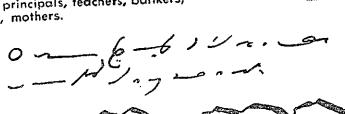
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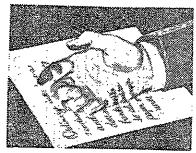
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Beaver Varsities Hope New Year Brings Successes

Now that we're all back here for another year, the 1953 fall athletic season will be commencing shortly. Despite the fact that the Institute is not noted as a producer of great ath- ball throw. These tests were given letic teams, we do have varsity representatives in virtually every intercollegiate sport with the exception of football. This fall both varsity and freshman teams will compete in cross country and soccer. In addition there are the Field Day sports, and the rugby and sailing teams.

Prospects for the year are better than average. Coach Oscar Hedlund's advertising photography with the J. cross country has four of its best five runners returning from last year's successful team. Led by Captain John Farquhar '54, the harriers should enjoy a very good season. The outlook for the new edition of the Beaver soccer team is fairly bright, as a host of lettermen, led by high scorer Rafael Morales '55, returns for another season. The '52 team won two, lost six and tied one, and this year's team, under the able direction of Coach Ben Martin, promises to be a great improvement.

New students who have never witnessed a rugby game will find it a fast and exciting game combining the best aspects of both football and soccer. The Sailing Team also consistently produces one of the northeast's top ranking teams.

The big celebration this fall will of course come on Field Day, when the freshmen and sophomores will fight it out for supremacy. However, only the football teams will play other games.

The prospects for the fall season are bright, and some of the Beaver Teams should enjoy successful years. At least they will provide some interesting competition.

Dinghies Painted

(Continued from page 1) the mast upright) to indicate wind direction, but they tended to foul by winding around the stay, they were subject to error because of deflection of the wind by the sail, and they could not be used on half the Institute's dinghies since they have no stays. The new telltales, made by George Bromfield, an alumni of the Institute, suffer from none of these disadvantages.

Dr. Harrison Award

(Continued from page 1) the Southwest Pacific Section of the Office of Field Service, OSD, and was Chief of the Research Section of General MacArthur's headquarters. In 1946 Dr. Harrison received the War Department Medal of Freedom, and in 1948 he was awarded the Presidential Medal of Merit, the highest civilian award.

Dr. Harrison was awarded the Rumford Medal in 1939, and in 1949, the Ives Medal of the Optical Society of America. He is a member of Sigma Xi, the American Philosophical Society, the American Academy of Arts and Sciences, the American Astronomical Society and a fellow of the American Physical Society. He also holds membership in the Optical Society of America. Since 1947 he has been Chairman of the Growing Board of the American Institute of Physics.

THE COLLEGE DANCE CLUB Want a date? A good time? You will have both at the College Dance Club Dances held every Friday night at the Hotel Kenmore and every Saturday at the Somerset. Attendance is restricted to college students, graduates, and their quests. One must be a member to purchase a ticket. Membership cards may be obtained after proof of educational status is submitted, i.e. college ring, bursar's receipt, library card, etc. Membership is co-ed. Just ask a member. The dances are loads of fun. This will be the eighth wonderful year. JOIN IN GAYETY - JOIN NOW. STAG \$1.25

New Athletic System

(Continued from page 1)

pulsory course is beginning swimming for those who fail to pass the 100yard test administered today.

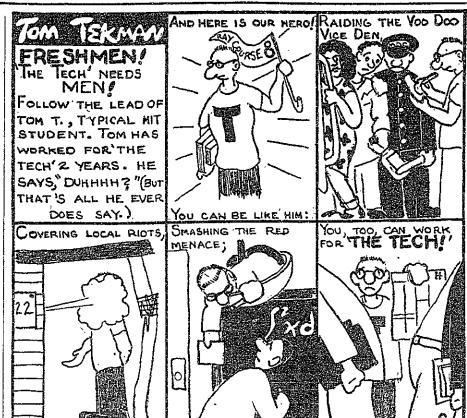
In addition, a new program of athletic tests has been instituted for incoming students. These include: Group I, pushups, situps, and other exercises, and Group II, including broken-field running, broad-jumping, and basketlast Friday.

Ross Photographs

(Continued from page 1)

California, where he was born in 1912. From Berkeley Public School he attended the University of Texas (1934). He has worked in the field of Walter Thompson Company.

His photographs, frequently shown in the San Francisco area since 1938, include a one man show in 1949 and a group show in 1950 at the San Francisco Museum of Arts.



Selective Service Tests

(Continued on page 1) postmarked no later than midnight November 2, 1953.

According to Educational Testing Service, which prepares and administers the College Qualification Test for the Selective Service System, it will be greatly to the student's advantage to file his application at once, regardless of the testing date he selects. The results will be reported to the student's Selective Service local board of jurisdiction for use in considering his deferment as a student.

MIT Musical Clubs

(Continued on page 1)

May 16 — Solo Concert — Morss Hall. In addition, this spring, the Choral Society and the Glee Club will perform at Mount Holyoke College, and the Glee Club will tour the Eastern Seaboard, playing in New York City, Philadelphia and possibly Washing-



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